

Work Plan

Partial Excavation Alternative

Introduction

In an October 12, 2012 letter to the West Lake Landfill Operable Unit-1 (OU-1) Respondents ("EPA's Letter"), EPA directed Respondents to update the analysis of the alternative presented in the May 2006 Feasibility Study for OU-1 (EMSI, 2006) ("FS") involving excavation of material with higher levels of radioactivity ("FS Partial Excavation Alternative"). EPA's Letter requested that the updated analysis be at a level of detail comparable to the alternatives already analyzed in the Supplemental Feasibility Study (SFS) for West Lake Landfill Operable Unit-1 (EMSI, 2011). To implement this directive, Respondents therefore need to use the same criteria that were used to define the FS Partial Excavation Alternative to define the scope of the Partial Excavation with Off-Site Disposal Alternative and Partial Excavation with On-Site Alternative requested in EPA's Letter ("Partial Excavation Alternatives") -- that is, the presence of radionuclides with activity levels greater than 1,000 picocuries per gram pCi/g or the presence of downhole gamma readings greater than 500,000 counts per minute (cpm).

Approach

The detailed evaluation of the Partial Excavation Alternatives will be prepared in a similar manner and level of detail as was used for the evaluation of the ROD-selected remedy and the two "complete rad removal alternatives", as presented in the SFS. Specifically, excavation and final grading plans will be prepared for the Partial Excavation Alternatives based on the criteria listed above. The volumes of overburden and radiologically-impacted material (RIM) that would be excavated under these alternatives will be calculated. The thickness of cover material necessary to provide protection against gamma radiation and radon emissions under the Partial Excavation Alternatives will be calculated using the same approach as was used in the SFS for evaluation of the cover thickness for the ROD-selected remedy. A construction schedule and cost estimate will be developed for the Partial Excavation Alternatives at a similar level of detail and based on similar assumptions and factors as were used to develop the schedules and cost estimates presented in the SFS. Calculations of the residual long-term risk that may remain under the Partial Excavation Alternatives as well as calculations of potential short-term risks to workers and the public will be performed in a manner similar to that used in the SFS.

Deliverables

Interim Deliverable --A technical memorandum will be prepared that presents the following information relative to the Partial Excavation Alternatives:

1. Definition of and basis for the overall scope of the Partial Excavation Alternatives;

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2. Excavation and final grading plans;
3. Cover thickness calculations;
4. Short-term and long-term risk calculations;
5. Construction schedule (for both fiscally and non-fiscally constrained approaches);
6. Construction cost estimates (for both fiscally and non-fiscally constrained approaches); and
7. Present value analysis (for both fiscally and non-fiscally constrained approaches).

SFS Revisions – The existing SFS text, tables and appendices will be amended to include the results of Partial Excavation Alternatives development and evaluation. Subject to EPA comments on the Interim Deliverable, the following specific revisions to the December 2011 SFS report are anticipated:

1. New SFS Sections would include:
 - a. Section 5.4 describing the Partial Excavation Alternatives
 - b. 6 2.4 presenting the detailed evaluation of the Partial Excavation Alternative with Off-Site Disposal
 - c. Section 6.2.5 presenting the detailed evaluation of the Partial Excavation Alternative with On-Site Disposal
 - d. New Appendix or New Sub-Appendices to Appendix B to present the evaluation of the volumes of RIM to be excavated under the Partial Excavation Alternatives
2. Sections of the SFS that would need to be amended include:
 - a. Section 7 – Comparative Analysis
 - b. Appendix F – Calculate the required cover thickness associated with the Partial Excavation Alternatives
 - c. Appendix H – Estimate the potential risks to the community and workers based on the volumes of RIM and overburden material to be excavated and revised construction schedules under the Partial Excavation Alternatives
 - d. Appendix I – Prepare additional estimates of Greenhouse Gas Emissions associated with the Partial Excavation Alternatives
 - e. Appendix J – Prepare additional construction schedules for the Partial Excavation Alternatives
 - f. Appendix J – Prepare additional estimates of the construction costs (both fiscally constrained and not-fiscally constrained) for the Partial Excavation Alternatives

Schedule

Upon receipt of EPA approval of this Work Plan, it is anticipated that evaluation of the Partial Excavation Alternatives and preparation of an Interim Technical Memorandum will require approximately four months.

Preparation of a Supplemental SFS report that includes the results of the evaluations of the Partial Excavation Alternatives will be performed once EPA comments on the interim deliverable are received

and in conjunction with revisions to the existing SFS report required to address the results of the various - - -
other additional tasks EPA has requested.

References

Engineering Management Support, Inc. (EMSI), 2011, Supplemental Feasibility Study, Radiologically-Impacted Material Excavation Alternative Analysis, West Lake Landfill Operable Unit-1, December 16.

EMSI, 2006, Feasibility Study, West Lake Landfill Operable Unit-1, May 8.